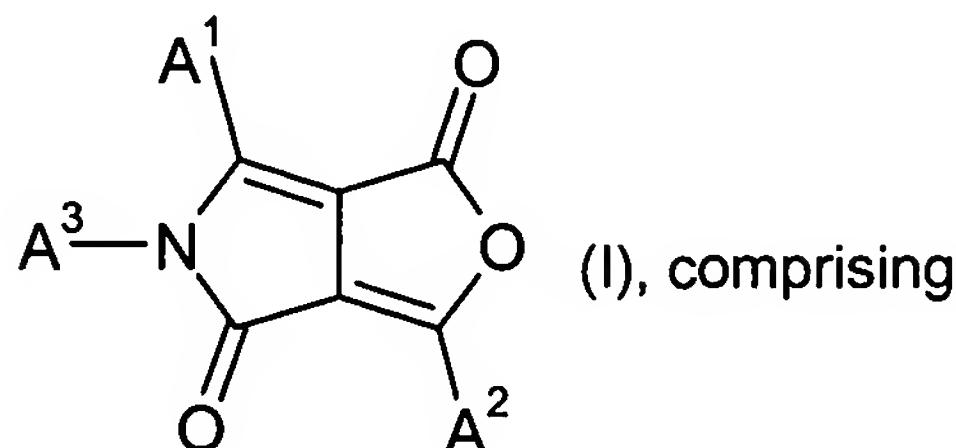


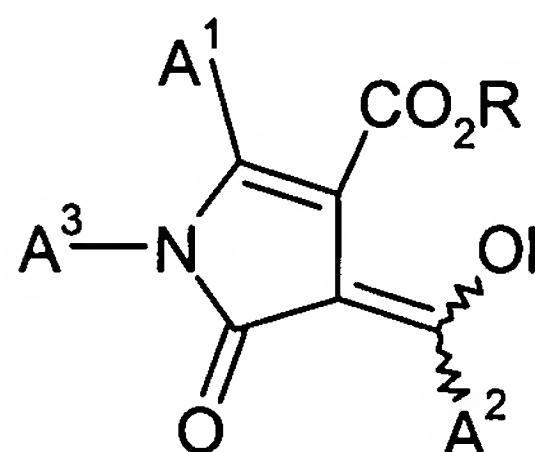
In the claims:

1. (currently amended) A process for the preparation of fuopyrroles of the general formula



(I), comprising

(a) microwave irradiation heating of a compound of the formula



(II) under microwave irradiation optionally in the presence of an inert

solvent,

wherein A¹ and A² are C₁-C₁₈alkyl, C₂-C₁₈alkenyl, C₂-C₁₈alkynyl, C₅-C₈cycloalkyl, C₅-C₈cycloalkenyl, aryl or heteroaryl,

A³ is hydrogen, C₁-C₁₈alkyl, cyanomethyl, Ar³, -CR³⁰R³¹-(CH₂)_m-Ar³ or Y-R³², wherein R³⁰ and R³¹ independently of each other stand for hydrogen or C₁-C₄alkyl, or phenyl which can be substituted up to three times with C₁-C₄alkyl,

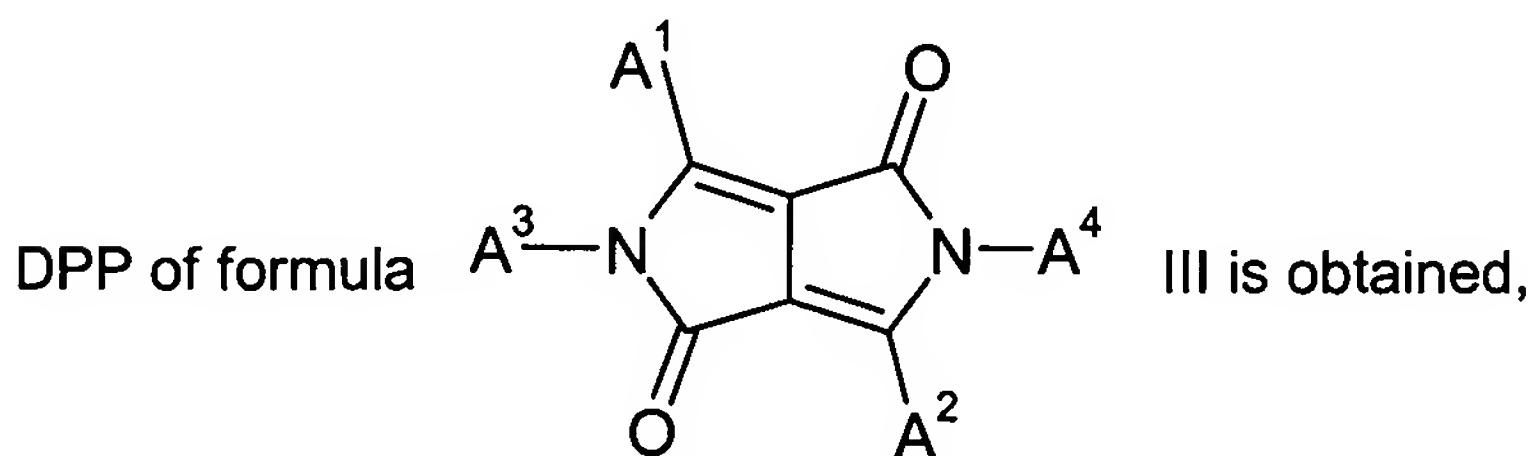
Ar³ stands for aryl, C₅-C₈cycloalkyl, C₅-C₈cycloalkenyl or heteroaryl, which can be substituted one to three times with C₁-C₈alkyl, C₁-C₈alkoxy, halogen or phenyl, which can be substituted with C₁-C₈alkyl or C₁-C₈alkoxy one to three times, and m stands for 0, 1, 2, 3 or 4,

R is C₁-C₁₈alkyl, aryl, or aralkyl, in which can be substituted one to three times with C₁-C₈alkyl, C₁-C₈alkoxy, or halogen,

Y is -C(O)-, -C(O)O-, -C(O)NH-, -SO₂NH- or -SO₂- and

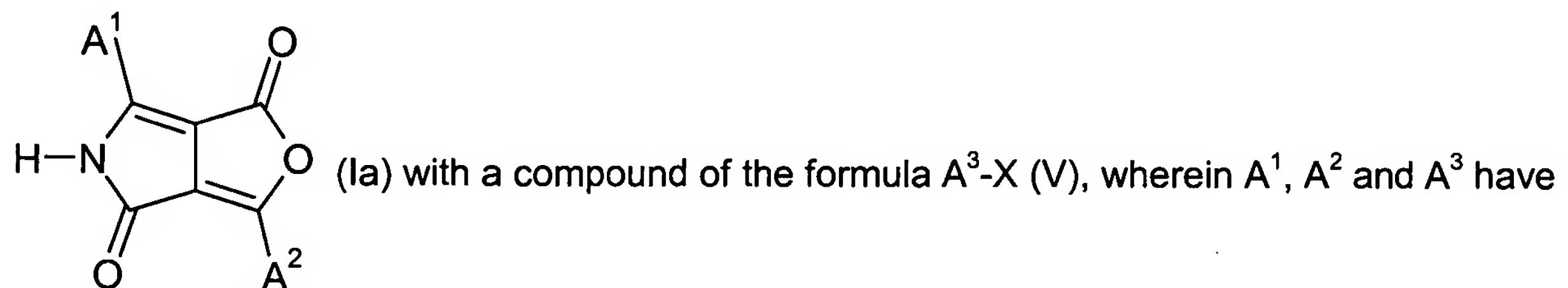
R³² is C₁-C₁₈alkyl, Ar³, or aralkyl.

2. (previously presented) The process according to claim 1, comprising in addition reacting a compound of formula I with a primary amine of the formula $A^4\text{-NH}_2$ (IV), wherein a

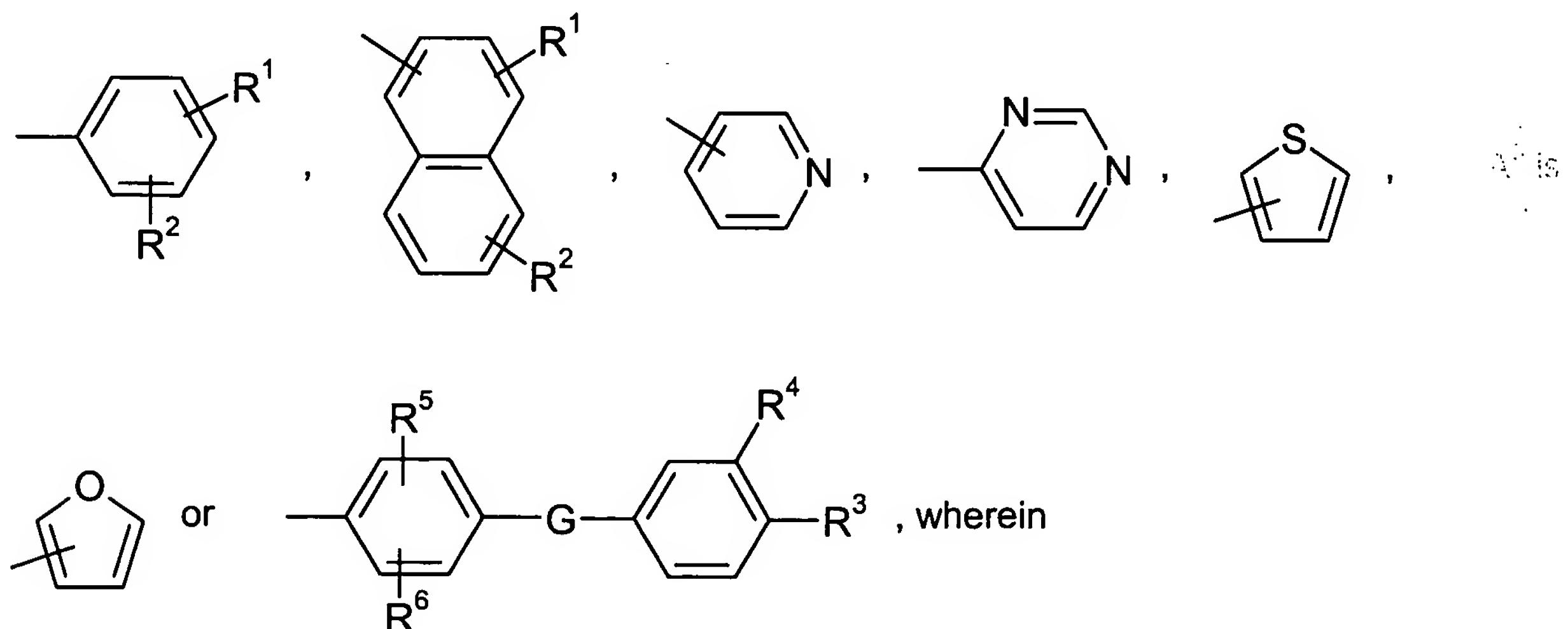


wherein A^4 is $C_1\text{-}C_{18}$ alkyl or Ar^3 , wherein Ar^3 , A^1 , A^2 and A^3 are defined as in claim 1.

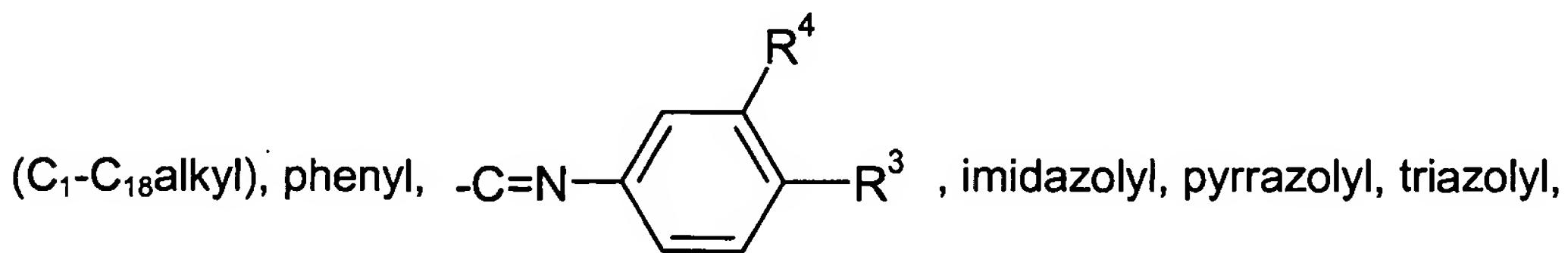
3. (original) The process according to claim 1, wherein the compound of the formula I, wherein A^3 is different from a hydrogen atom, is obtained by reacting a compound of the formula



4. (previously presented) The process according to claim 1, wherein A^1 and A^2 are radicals of the formula



R^1 and R^2 are independently of each other hydrogen, halogen, C_1 - C_{18} alkyl, C_1 - C_{18} alkoxy, C_1 - C_{18} alkylmercapto, C_1 - C_{18} alkylamino, C_1 - C_{18} alkoxycarbonyl, C_1 - C_{18} alkylaminocarbonyl, -CN, -NO₂, trifluoromethyl, C_5 - C_8 cycloalkyl, -C=N-

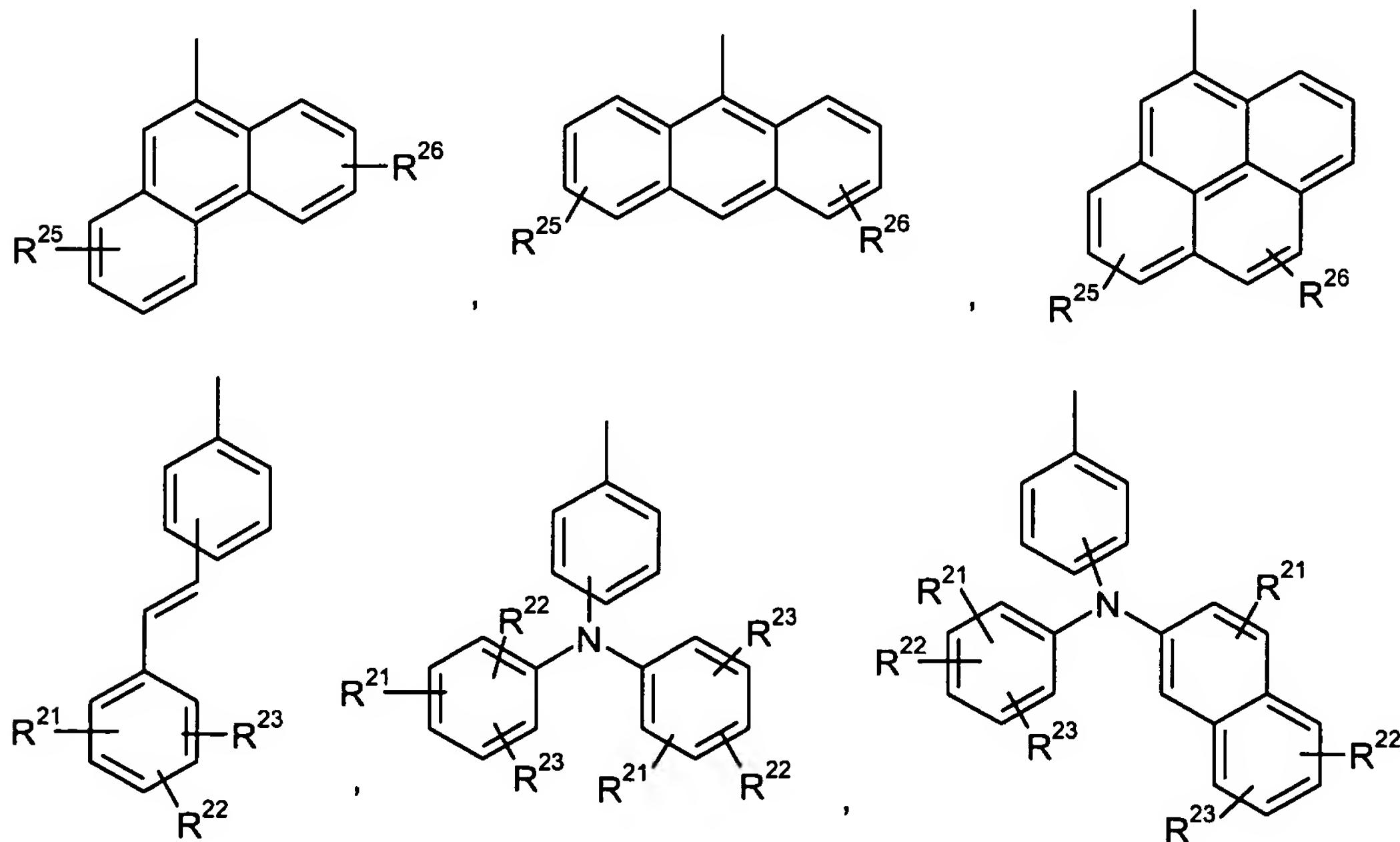


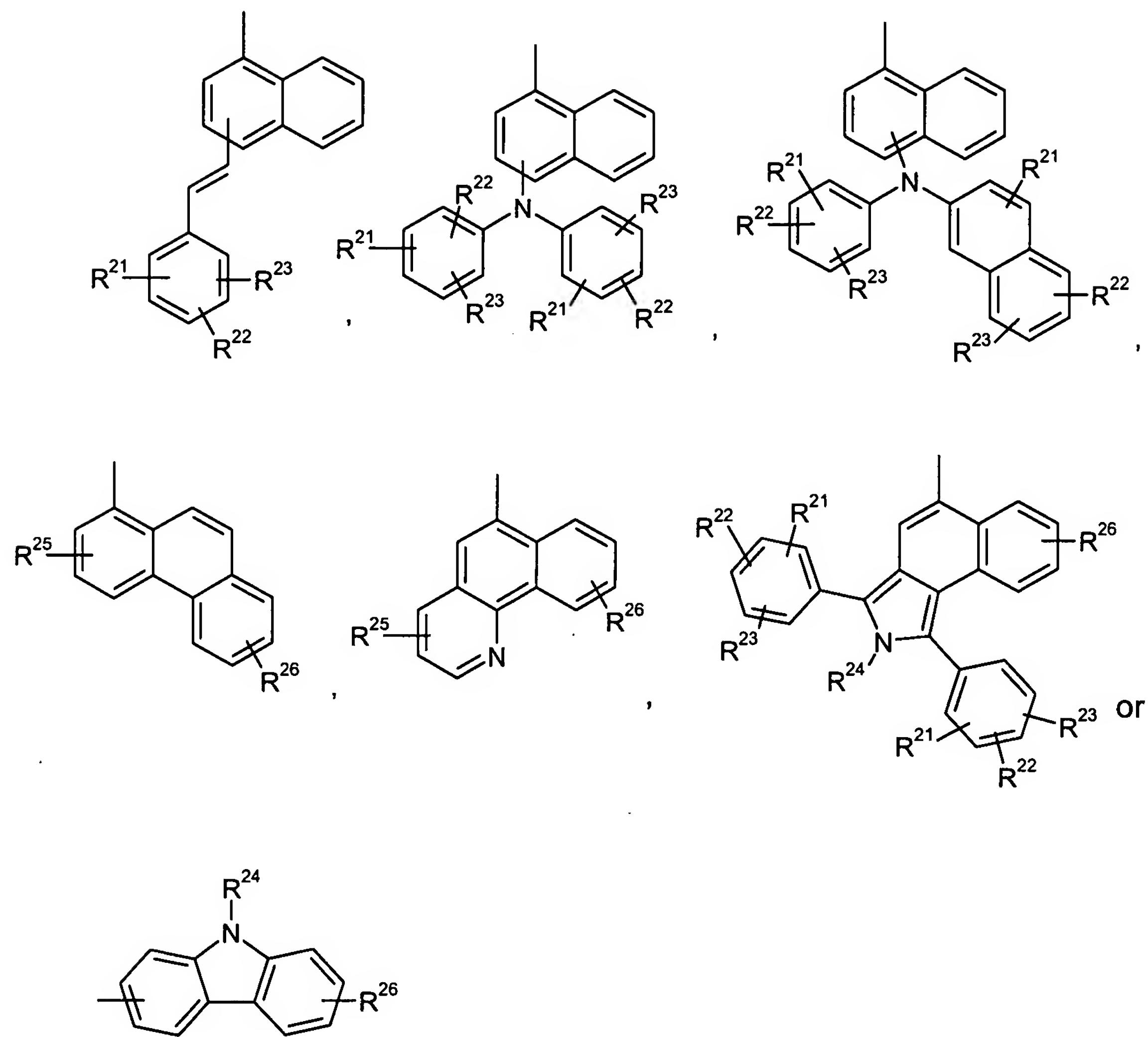
piperazinyl, pyrrolyl, oxazolyl, benzoxazolyl, benzothiazolyl, benzimidazolyl, morpholinyl, piperidinyl or pyrrolidinyl, -CONX⁵X⁶, -C(O)OX⁷ or -SO₂X⁹; wherein X⁵ and X⁶ are hydrogen, linear or branched C_{1-10} -alkyl, C_{5-10} -cycloalkyl or C_{6-10} -aryl, X⁷ is hydrogen, linear or branched C_{1-10} -alkyl, C_{5-10} -cycloalkyl or C_{6-10} -aryl, X⁹ is hydrogen, linear or branched C_{1-10} -alkyl, C_{5-10} -cycloalkyl, C_{7-10} -aralkyl, C_{6-10} -aryl or -NX¹⁰X¹¹, wherein X¹⁰ and X¹¹ are hydrogen, linear or branched C_{1-10} -alkyl, C_{7-10} -aralkyl or C_{6-10} -aryl,

G is -CH₂-, -CH(CH₃)-, -C(CH₃)₂-, -CH=N-, -N=N-, -O-, -S-, -SO-, -SO₂-, -SO₂NH-, -CONH- or -NR⁷-,

R^3 and R^4 are independently of each other hydrogen, halogen, C_1 - C_6 alkyl, C_1 - C_{18} alkoxy or -CN, R^5 and R^6 are independently of each other hydrogen, halogen or C_1 - C_6 alkyl, and R^7 is hydrogen or C_1 - C_6 alkyl;

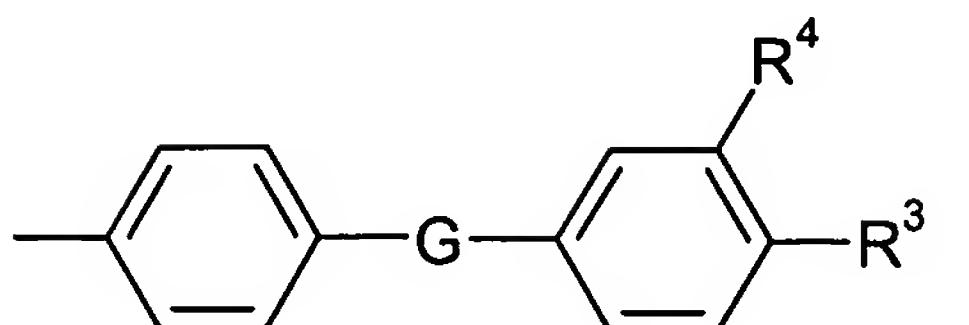
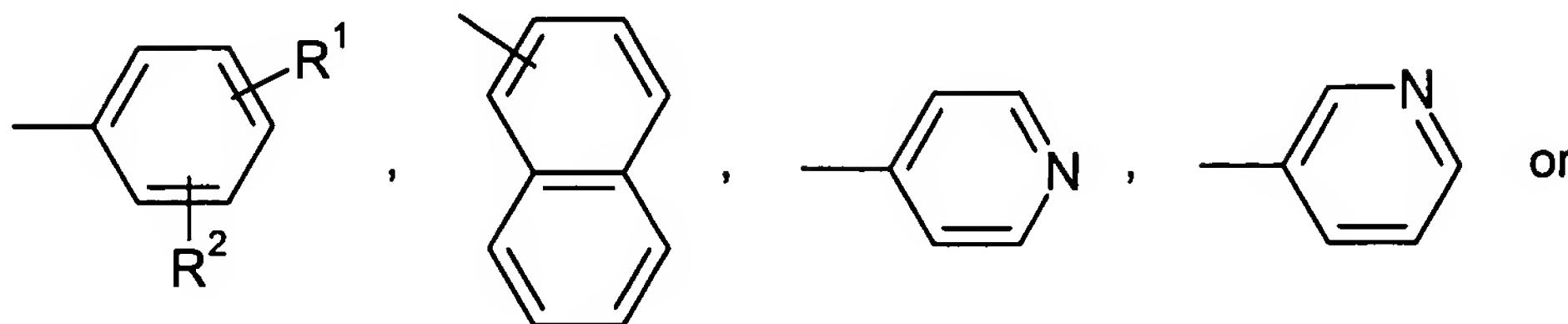
or A¹ and A² are radicals of the formula





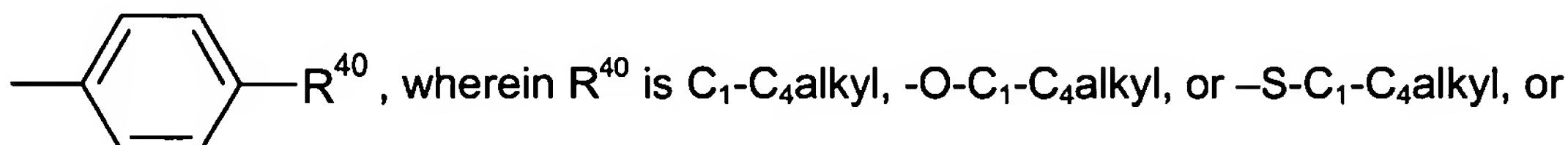
wherein R^{21} , R^{22} , R^{23} , R^{25} and R^{26} are independently of each other hydrogen, C₁-C₈alkyl, a hydroxyl group, a mercapto group, C₁-C₈alkoxy, C₁-C₈alkylthio, halogen, halo-C₁-C₈alkyl, a cyano group, an aldehyde group, a ketone group, a carboxyl group, an ester group, a carbamoyl group, an amino group, a nitro group, a silyl group or a siloxanyl group and R^{24} is a C₁-C₆alkyl group.

5. (original) The process according to claim 4, wherein A¹ and A² are radicals of the formula

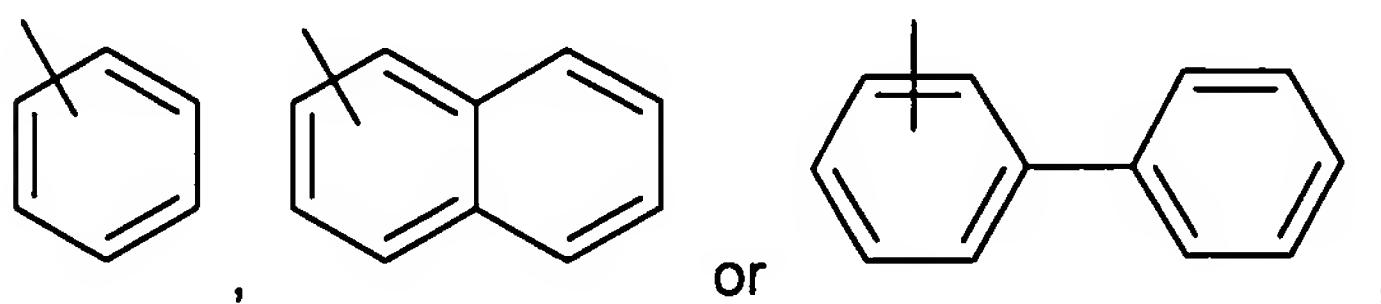


wherein R¹ and R² are independently of each other hydrogen, chloro, bromo, C₁-C₄alkyl, C₁-C₆alkoxy, C₁-C₆alkylamino, phenyl or CN,
G is -O-, -NR⁷-, -N=N- or -SO₂- ,
R³ and R⁴ are hydrogen, and
R⁷ is hydrogen, methyl or ethyl.

6. (previously presented) The process according to claim 4, wherein A³ is cyanomethyl, C₁-C₈alkyl, Y-R³² wherein Y is -C(O)- and R³² is

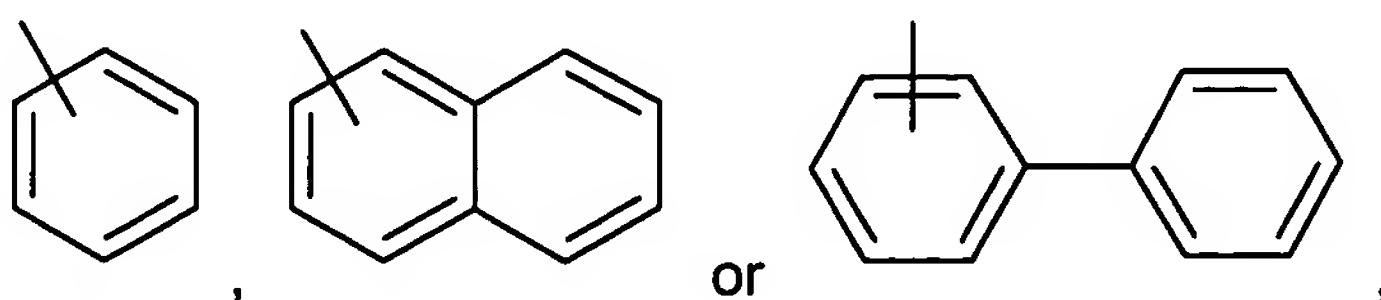


-(CH₂)_m-Ar wherein m is 1 and Ar is a group of the formula



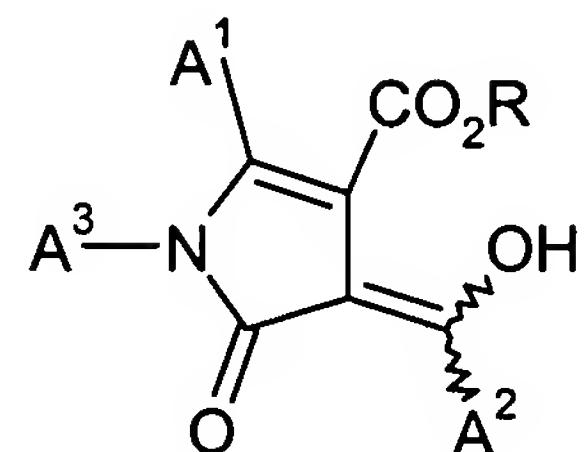
which can be substituted one to three times with C₁-C₈alkyl, C₁-C₈alkoxy, halogen or phenyl.

7. (previously presented) The process according to claim 4, wherein A⁴ is



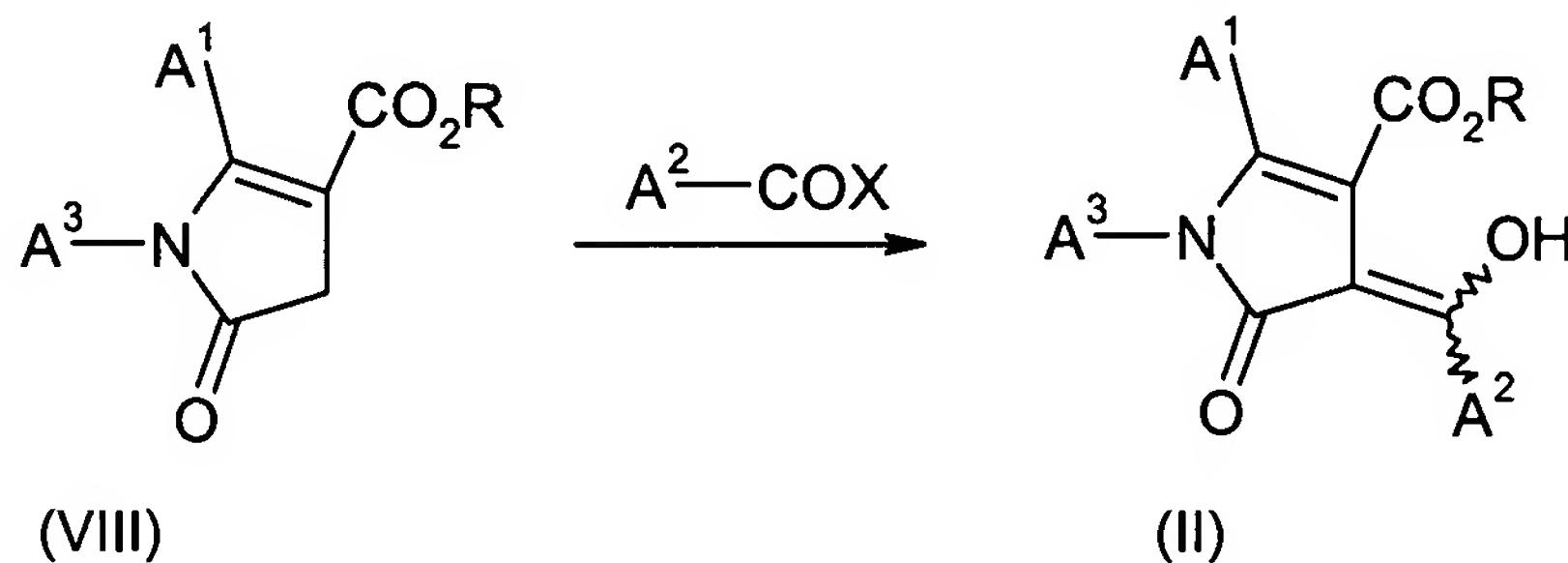
which can be substituted one to three times with C₁-C₈alkyl, C₁-C₈alkoxy, halogen or phenyl.

8. (previously presented) The process according to claim 1, wherein the starting compound of formula (II)



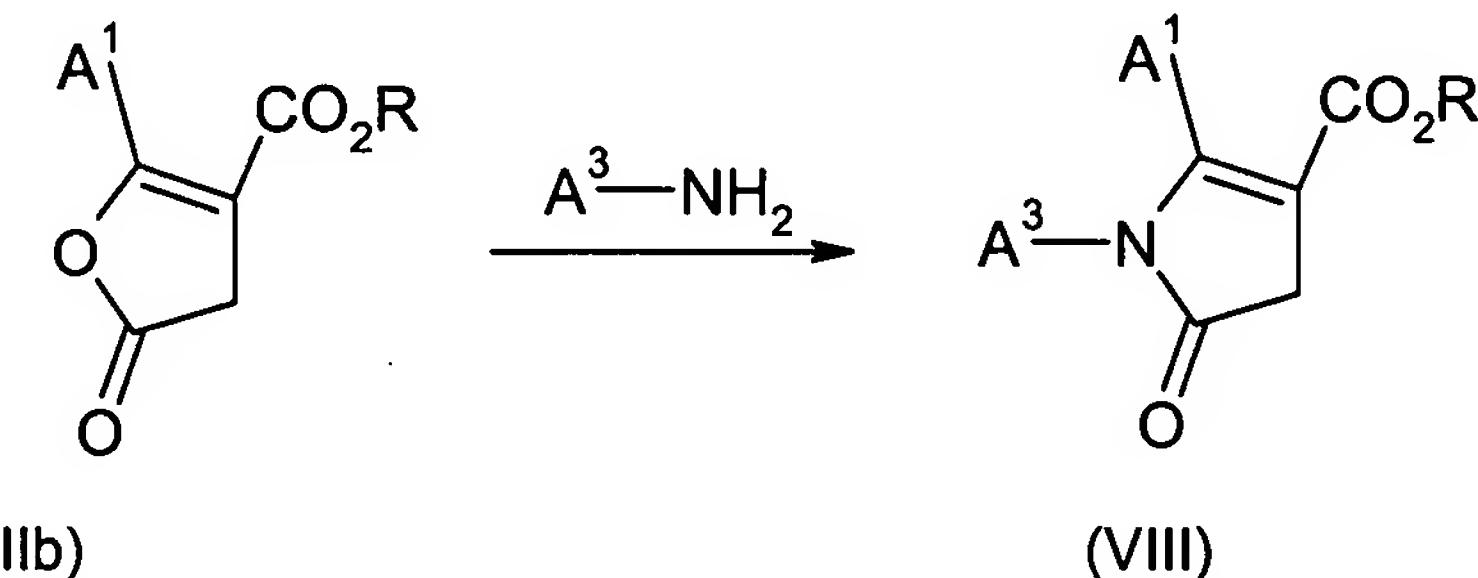
(II)

is obtained by reacting a compound of formula (VIII) with an acyl halide $A^2 - COX$:



wherein R, A^1 and A^2 have the same meaning as given in claim 1, A^3 is aryl, and X is halogen.

9. (original): The process according to claim 8, wherein the compound of formula (VIII) is obtained by reacting a compound of formula (IIb) with an amine $A^3 - NH_2$:



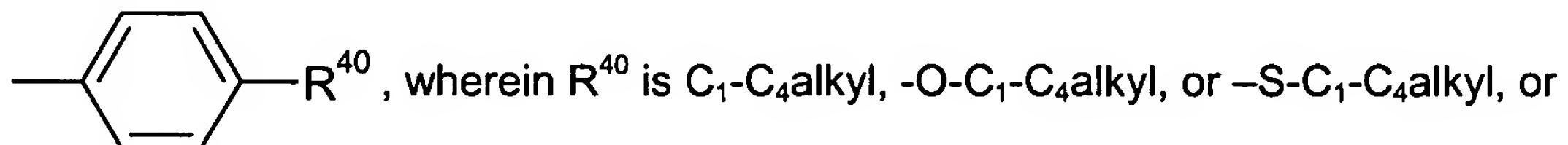
wherein R and A^1 have the same meaning as given in claim 1 and A^3 is aryl

10. (cancelled)

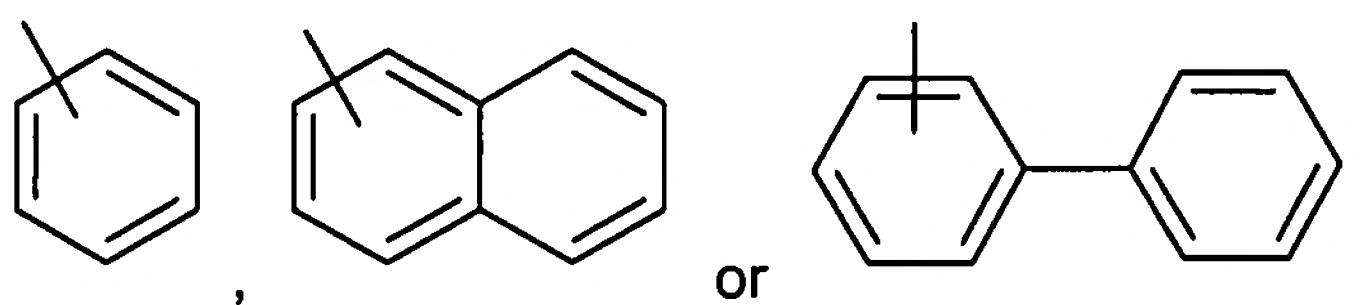
11-12 (canceled)

13. (previously presented) A process according to claim 1, wherein R is C₁-C₄alkyl, phenyl, or benzyl, which can be substituted one to three times with C₁-C₈alkyl, C₁-C₈alkoxy, or halogen.

14. (previously presented) A process according to claim 5, wherein A³ is cyanomethyl, C₁-C₈alkyl, Y-R³² wherein Y is -C(O)- and R³² is



-(CH₂)_m-Ar wherein m is 1 and Ar is a group of the formula



which can be substituted one to three times with C₁-C₈alkyl, C₁-C₈alkoxy, halogen or phenyl.

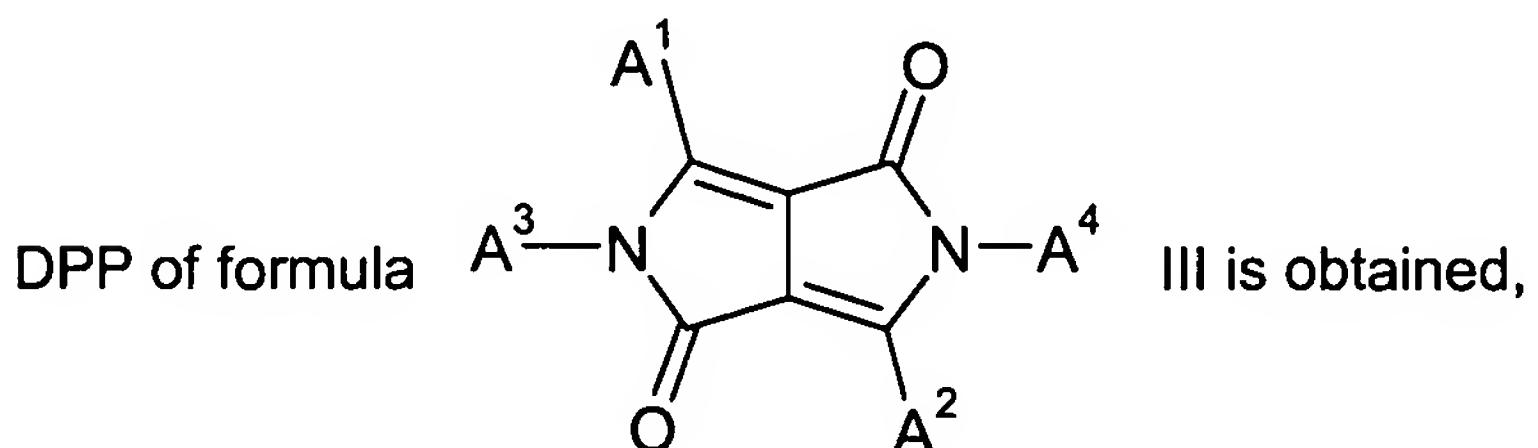
15. (new) A process for the preparation of fuopyrroles according to claim 1 wherein wherein A¹ and A² are aryl and

A³ is hydrogen, C₁-C₁₈alkyl, cyanomethyl, Ar³, -CR³⁰R³¹-(CH₂)_m-Ar³ or Y-R³², wherein R³⁰ and R³¹ independently of each other stand for hydrogen or C₁-C₄alkyl, or phenyl which can be substituted up to three times with C₁-C₄alkyl,

Ar³ stands for aryl, C₅-C₈cycloalkyl or C₅-C₈cycloalkenyl, which can be substituted one to three times with C₁-C₈alkyl, C₁-C₈alkoxy, halogen or phenyl, which can be substituted with C₁-C₈alkyl or C₁-C₈alkoxy one to three times, and m stands for 0, 1, 2, 3 or 4.

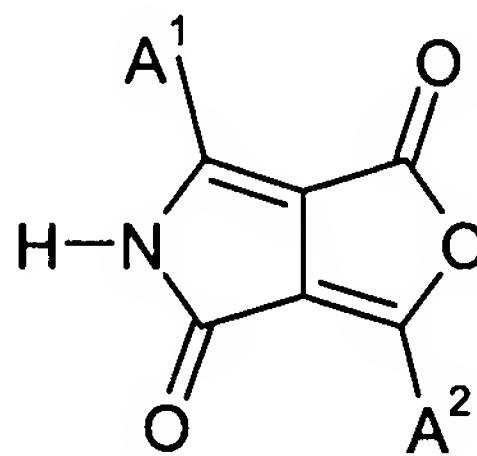
16. (new) The process according to claim 15, comprising in addition

reacting a compound of formula I with a primary amine of the formula A⁴-NH₂ (IV), wherein a



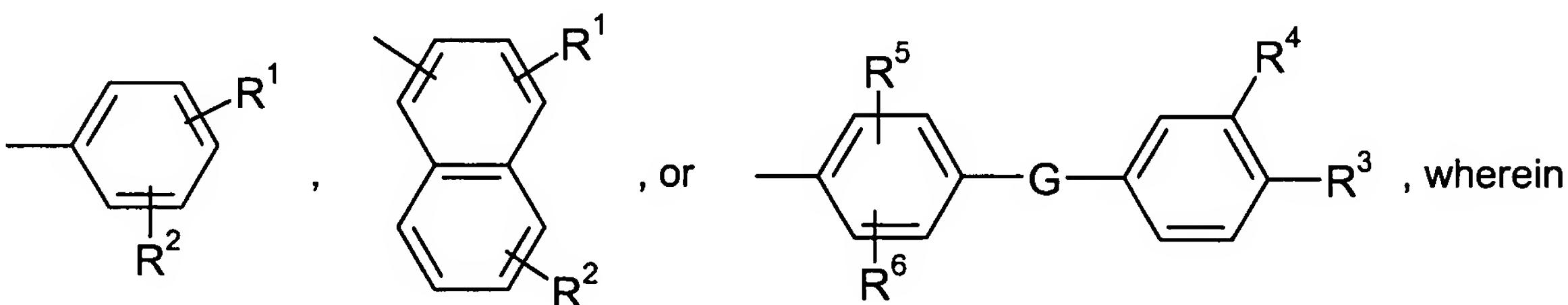
wherein A⁴ is C₁-C₁₈alkyl or Ar³.

17. (new) The process according to claim 15, wherein the compound of the formula I, wherein A³ is different from a hydrogen atom, is obtained by reacting a compound of the formula

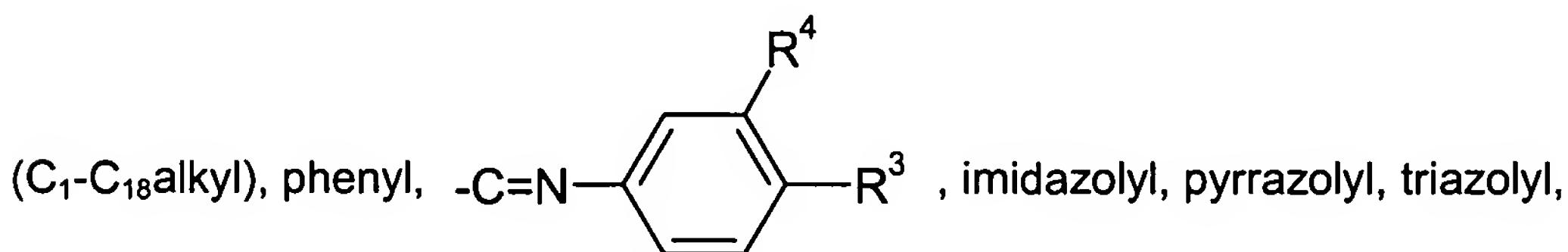


(Ia) with a compound of the formula A³-X (V), wherein X is a leaving group.

18. (new) The process according to claim 15, wherein A¹ and A² are radicals of the formula



R¹ and R² are independently of each other hydrogen, halogen, C₁-C₁₈alkyl, C₁-C₁₈alkoxy, C₁-C₁₈alkylmercapto, C₁-C₁₈alkylamino, C₁-C₁₈alkoxycarbonyl, C₁-C₁₈alkylaminocarbonyl, -CN, -NO₂, trifluoromethyl, C₅-C₈cycloalkyl, -C=N-

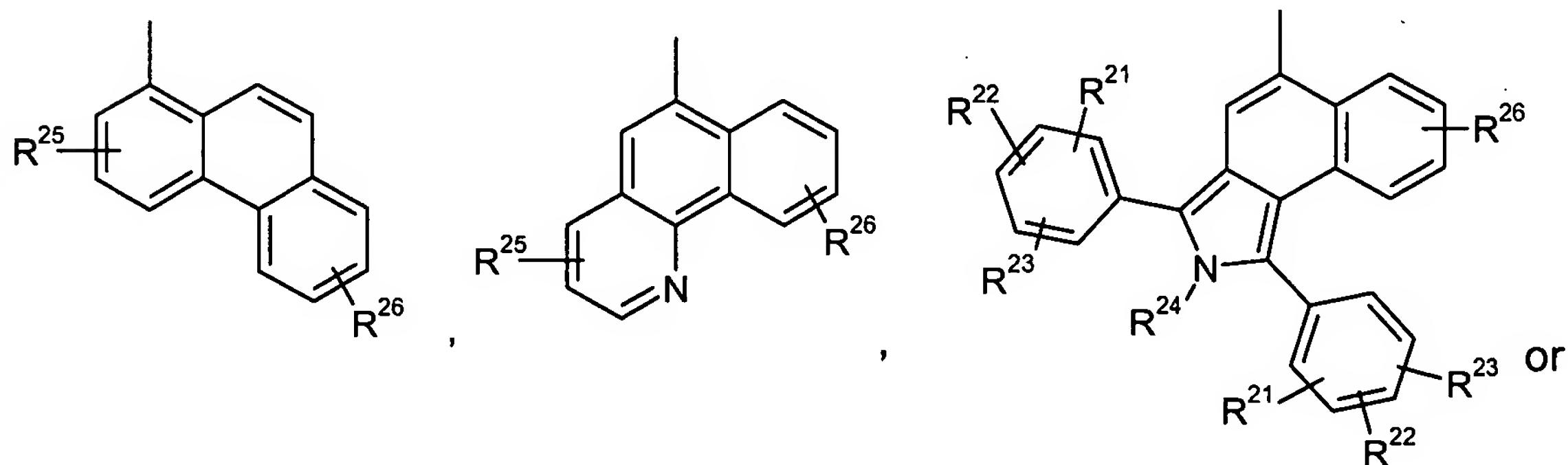
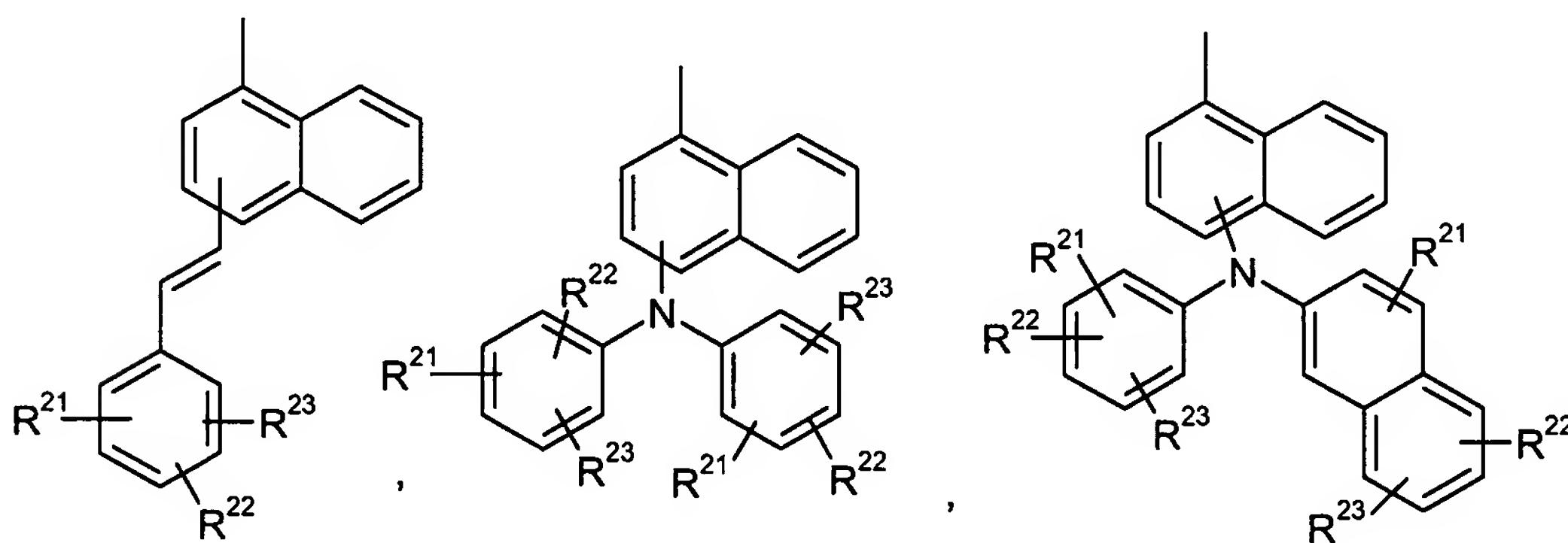
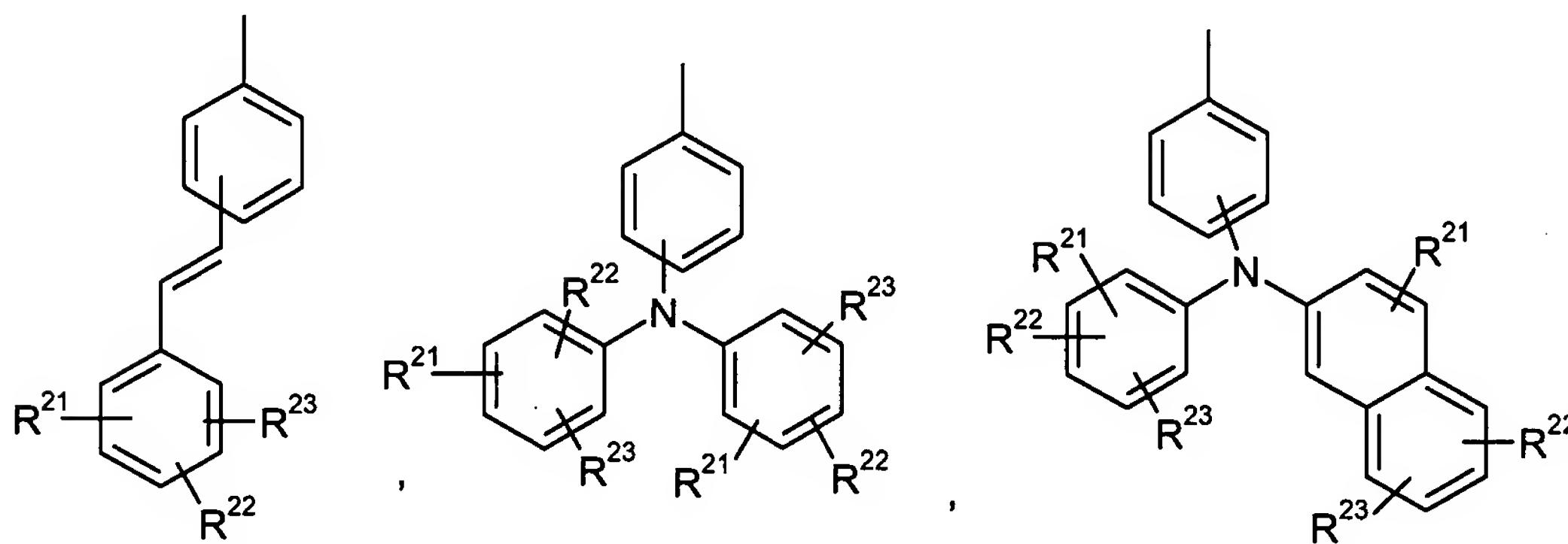
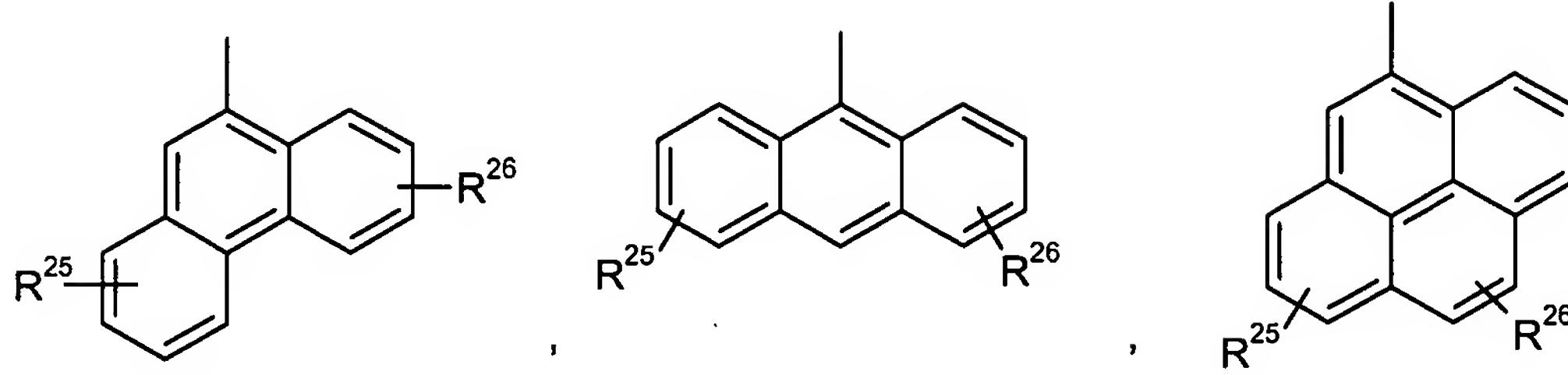


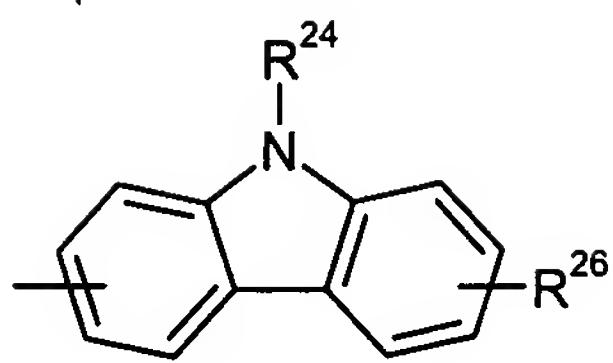
(C₁-C₁₈alkyl), phenyl, -C=N-phenyl-R³, imidazolyl, pyrazolyl, triazolyl, piperazinyl, pyrrolyl, oxazolyl, benzoxazolyl, benzothiazolyl, benzimidazolyl, morpholinyl, piperidinyl or pyrrolidinyl, -CONX⁵X⁶, -C(O)OX⁷ or -SO₂X⁹; wherein X⁵ and X⁶ are hydrogen, linear or branched C₁-₁₀-alkyl, C₅-₁₀-cycloalkyl or C₆-₁₀-aryl, X⁷ is hydrogen, linear or branched C₁-₁₀-alkyl, C₅-₁₀-cycloalkyl or C₆-₁₀-aryl, X⁹ is hydrogen, linear or branched C₁-₁₀-alkyl, C₇-₁₀-aralkyl, C₆-₁₀-aryl or -NX¹⁰X¹¹, wherein X¹⁰ and X¹¹ are hydrogen, linear or branched C₁-₁₀-alkyl, C₇-₁₀-aralkyl or C₆-₁₀-aryl,

G is -CH₂-, -CH(CH₃)-, -C(CH₃)₂-, -CH=N-, -N=N-, -O-, -S-, -SO-, -SO₂-, -SO₂NH-, -CONH- or -NR⁷-,

R³ and R⁴ are independently of each other hydrogen, halogen, C₁-C₆alkyl, C₁-C₁₈alkoxy or -CN, R⁵ and R⁶ are independently of each other hydrogen, halogen or C₁-C₆alkyl, and R⁷ is hydrogen or C₁-C₆alkyl;

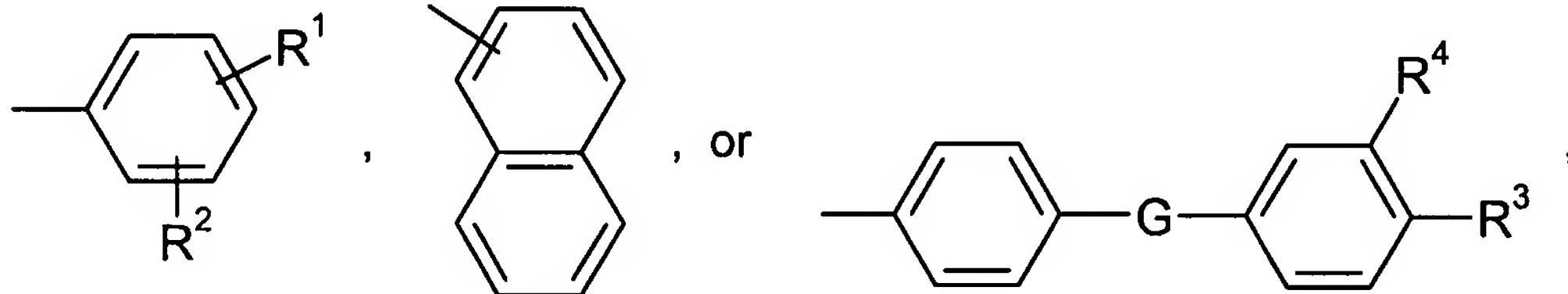
or A¹ and A² are radicals of the formula





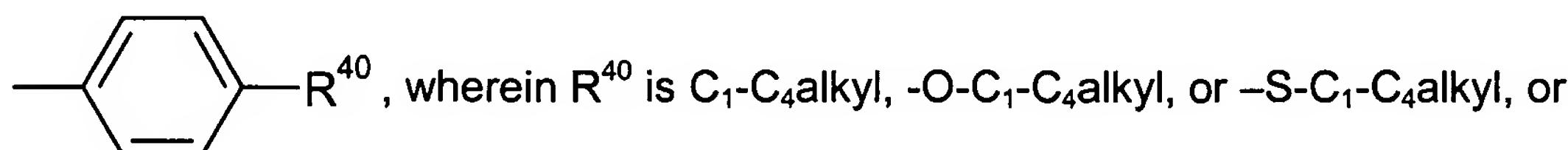
wherein R^{21} , R^{22} , R^{23} , R^{25} and R^{26} are independently of each other hydrogen, C_1 - C_8 alkyl, a hydroxyl group, a mercapto group, C_1 - C_8 alkoxy, C_1 - C_8 alkylthio, halogen, halo- C_1 - C_8 alkyl, a cyano group, an aldehyde group, a ketone group, a carboxyl group, an ester group, a carbamoyl group, an amino group, a nitro group, a silyl group or a siloxanyl group and R^{24} is a C_1 - C_6 alkyl group.

19. (new) The process according to claim 18, wherein A^1 and A^2 are radicals of the formula

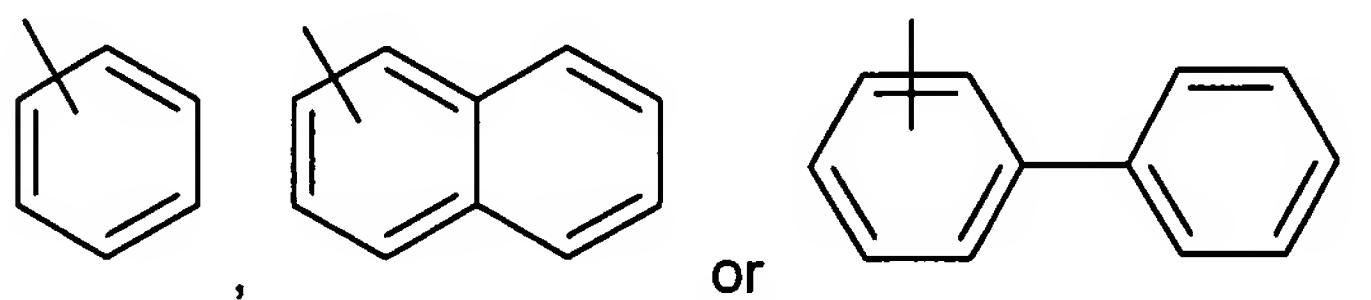


wherein R^1 and R^2 are independently of each other hydrogen, chloro, bromo, C_1 - C_4 alkyl, C_1 - C_6 alkoxy, C_1 - C_6 alkylamino, phenyl or CN,
 G is $-O-$, $-NR^7-$, $-N=N-$ or $-SO_2-$,
 R^3 and R^4 are hydrogen, and
 R^7 is hydrogen, methyl or ethyl.

20. (new) The process according to claim 18, wherein A^3 is cyanomethyl, C_1 - C_8 alkyl, $Y-R^{32}$ wherein Y is $-C(O)-$ and R^{32} is

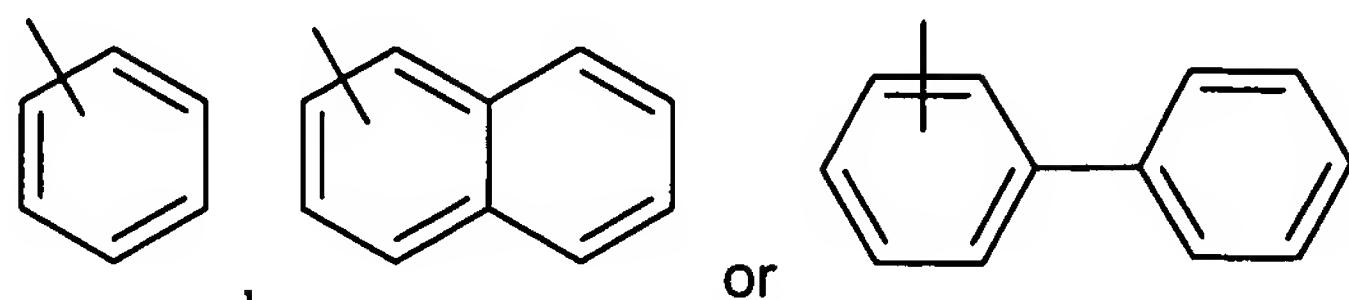


$-(CH_2)_m-Ar$ wherein m is 1 and Ar is a group of the formula



which can be substituted one to three times with C_1 - C_8 alkyl, C_1 - C_8 alkoxy, halogen or phenyl.

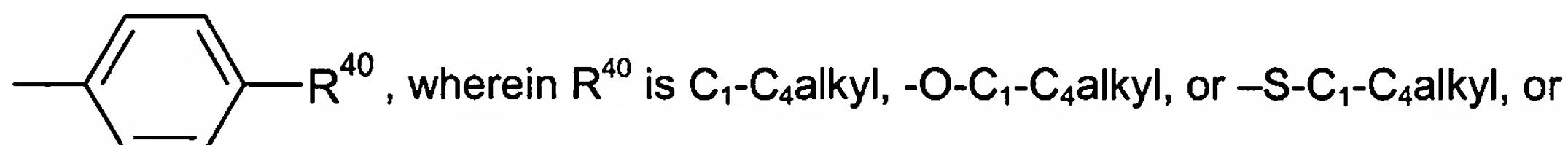
21. (new) The process according to claim 18, wherein A⁴ is



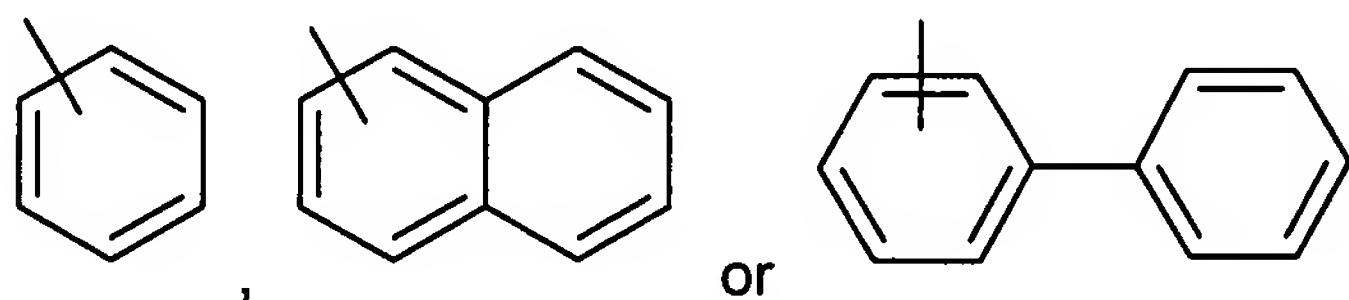
which can be substituted one to three times with C₁-C₈alkyl, C₁-C₈alkoxy, halogen or phenyl.

22. (new) A process according to claim 15, wherein R is C₁-C₄alkyl, phenyl, or benzyl, which can be substituted one to three times with C₁-C₈alkyl, C₁-C₈alkoxy, or halogen.

23. (new) A process according to claim 19, wherein A³ is cyanomethyl, C₁-C₈alkyl, Y-R³² wherein Y is -C(O)- and R³² is



-(CH₂)_m-Ar wherein m is 1 and Ar is a group of the formula



which can be substituted one to three times with C₁-C₈alkyl, C₁-C₈alkoxy, halogen or phenyl.